

WHAT IS CLAIMED IS:

1. A resin composition comprising:
a thermosetting resin; and
a filler dispersed in the thermosetting resin,
wherein a particle size curve of the filler has a small-diameter peak, a large-diameter peak having a higher frequency than that of the small-diameter peak, and a valley which is positioned between the small-diameter peak and the large-diameter peak and has a lower frequency than that of the small-diameter peak.
2. The resin composition according to Claim 1,
wherein particles of the filler are nearly spherical.
3. The resin composition according to Claim 1,
wherein the thermosetting resin is an epoxy resin.
4. The resin composition according to Claim 1,
wherein a frequency ratio of the large-diameter peak and the small-diameter peak is between 1:0.1 and 1:0.2.
5. The resin composition according to Claim 1,
wherein a frequency of the large-diameter peak is 8% to 9%, a frequency of the small-diameter peak is 1% to 2%, and a frequency of the valley is 0.5% or less.

6. The resin composition according to Claim 1,

wherein the large-diameter peak, the small-diameter peak, and the valley show a particle diameter ratio of 1:Y:Z, wherein Y is between 0.01 and 0.07 and Z is between 0.09 and 0.25.

7. The resin composition according to Claim 1,

wherein the large-diameter peak has a particle diameter of 30 to 50 μm , the small-diameter peak has a particle diameter of 0.7 to 3 μm , and the valley has a particle diameter of 4 to 10 μm .

8. The resin composition according to Claim 1,

wherein a frequency ratio of the valley to the large-diameter peak is 0.08 or less.

9. An ignition coil device comprising:

a primary coil which a primary coil wire is wound around and generates a voltage;

a secondary coil which a secondary coil wire is wound around, boosts the voltage generated from the primary coil, and applies the voltage to an ignition plug; and

a resin composition which penetrates into gaps of the primary coil wire and of the secondary coil wire and is cured to ensure insulation,

wherein the resin composition includes a thermosetting resin and a filler dispersed in the thermosetting resin, and

wherein a particle size curve of the filler has a small-diameter peak, a large-diameter peak having a higher frequency than that of the small-diameter peak, and a valley which is positioned between the small-diameter peak and the large-diameter peak and has a lower frequency than that of the small-diameter peak.

10. The ignition coil device according to Claim 9, wherein particles of the filler are nearly spherical.

11. The ignition coil device according to Claim 9, wherein the thermosetting resin is an epoxy resin.

12. The ignition coil device to Claim 9, wherein a frequency ratio of the large-diameter peak and the small-diameter peak is between 1:0.1 and 1:0.2.

13. The ignition coil device according to Claim 9, wherein a frequency of the large-diameter peak is 8% to 9%, a frequency of the small-diameter peak is 1% to 2%, and a frequency of the valley is 0.5% or less.

14. The ignition coil device according to Claim 9, wherein the large-diameter peak, the small-diameter peak, and the valley show a particle diameter ratio of 1:Y:Z, wherein Y is between 0.01 and 0.07 and Z is between 0.09 and 0.25.

15. The ignition coil device according to Claim 9,
wherein the large-diameter peak has a particle diameter
of 30 to 50 μm , the small-diameter peak has a particle diameter
of 0.7 to 3 μm , and the valley has a particle diameter of 4 to
10 μm .

16. The ignition coil device according to Claim 9,
wherein a frequency ratio of the valley to the large-
diameter peak is 0.08 or less.

17. The ignition coil device according to Claim 9,
wherein the ignition coil device is directly mounted in
an engine's plug hole.

18. The ignition coil device according to Claim 9,
wherein there is a distance ranging from 5 to 700 μm
between adjacent turns of the secondary coil wire.